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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,280	03/08/2001	Michael R. Franceschini	RTN-098AUS	6871
22494	7590	04/19/2005	EXAMINER	
DALY, CROWLEY, MOFFORD & DURKEE, LLP			CORRIELUS, JEAN B	
SUITE 101				
275 TURNPIKE STREET			ART UNIT	PAPER NUMBER
CANTON, MA 02021-2310			2637	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/802,280

Applicant(s)

FRANCESCHINI ET AL.

Examiner

Jean B Corielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/05/02&10/03/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Election/Restrictions

1. Applicant's election without traverse of claims 1-6 and 10-15 in the reply filed on 12/13/04 is acknowledged.
2. Claims 7-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 12/13/04.

Claim Objections

3. Claims 1-6 are objected to because of the following informalities: claim 1, line 2, "algorithm" should be replaced by "encoder"; line 4, "interleaving "should be replaced by "interleaver. The same comment applies to claim 11. Claim 2-6 and 12-15 are likewise objected because of their dependency to an objected base claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by

Secord et al US Patent No. 6,373,831.

Secord et al discloses spread spectrum RF communication system comprising a FEC encoder 10 to encode digital data to provide a plurality of code symbols (symbol groups) see col. 4, line 33; an interleaver 20 to map each one of the plurality of code symbols (symbol groups) into a corresponding one of a plurality of N carriers (coherent subbands); a Walsh subband encoder 50 to encode each one of the plurality of N carriers (coherent subbands).

As per claim 3, the encoder is a Turbo encoder. See col. 3, lines 63-65

As per claim 4, the encoder is a convolutional encoder. See col. 3, lines 63-65.

As per claim 5, the device further comprises a spreader (transmission security device) to spread (encrypt) each one of the Walsh encoded code symbols (symbol groups).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Secord et al.

As applied to claim 1 above, Steele discloses every feature of the claimed invention but does not specifically disclose the use of RS encoder it only teaches that the encoder includes Convolutional encoder and Turbo encoder block encoder etc. it would have been obvious that the FEC encoder would have also included a RS encoder as RS encoder are a well known FEC encoder for its enhanced error protection capability.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Secord et al in view of Steele US Patent No. 4,393,276.

As applied to claim 1 above, Steele discloses every feature of the claimed invention but does not specifically disclose that an IFFT is coupled to the security device (spreader). Steele discloses an IFFT 16 is coupled to the security device 14. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Secord et al so as to convert the signal to a time domain representation suitable for transmission to a distant receiver such as a CDMA receiver.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Secord et al in view of Steele US Patent No. 4,393,276.

As applied to claim 11 above, Steele discloses every feature of the claimed invention but does not specifically disclose that an IFFT is coupled to the security

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device (spreader). Steele discloses an IFFT 16 is coupled to the security device 14.

Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Secord et al so as to convert the signal to a time domain representation suitable for transmission to a distant receiver such as a CDMA receiver.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Secord in view of Huang et al US Patent No. 6,519,731.

Secord et al discloses spread spectrum RF communication system comprising a FEC encoder 10 to encode digital data to provide a plurality of code symbols (symbol groups) see col. 4, line 33; an interleaver 20 to map each one of the plurality of code symbols (symbol groups) into a corresponding one of a plurality of N carriers (coherent subbands); a Walsh subband encoder 50 to encode each one of the plurality of N carriers (coherent subbands).

However, Secord does not teach or fairly suggest that the further steps of forming data stream includes a plurality of packets and embedding each data packet into a physical layer by adding a header, and CRC information to each packet. It also fails to teach that the Walsh code is a low rate Walsh code. However, packetizing a data information and adding a header and CRC information to each packet are old and well known in the art. For instance, Huang et al discloses, fig. 2 the further limitations of packetizing a data information and adding a header and CRC information to each packet see fig. 2 and col. 3, lines 27-45. Given that fact, it would have been obvious to one skill in the art to incorporate such a teaching in Secord in order to ensure that data

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is sent in block rather than a bit by bit basis so as to enhance transmission time in addition the occurrence of error in the received would have been kept at minimum. In addition, it would have been obvious to one skilled in the art to use low rate Walsh code in order to be able to low rate signal such as voice signal.

Allowable Subject Matter


11. Claims 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-3086. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrielus
Primary Examiner
Art Unit 2637

4-12-05